

What is claimed is:

1. A catheter shaft assembly, comprising:
- a first elongate shaft having an inner surface defining a lumen;
 - a second elongate shaft slidably disposed within the lumen of the first elongate shaft;
 - at least one interstitial member disposed between the inner surface of the first elongate shaft and the outer surface of the second elongate shaft.
2. The catheter shaft assembly of claim 1, wherein the at least one interstitial member comprises a projection extending beyond the outer surface of the second elongate shaft.
3. The catheter shaft assembly of claim 1, wherein the at least one interstitial member comprises a projection extending beyond the inner surface of the first elongate shaft.
4. The catheter shaft assembly of claim 1, wherein the at least one interstitial member comprises a coil.
5. The catheter shaft assembly of claim 1, wherein the at least one interstitial member comprises a coil disposed between the inner surface of the first elongate shaft and the outer surface of the second elongate shaft.

6. The catheter shaft assembly of claim 1, wherein the at least one interstitial member comprises a radial rib extending beyond the inner surface of the first elongate shaft.

7. The catheter shaft assembly of claim 1, wherein the at least one interstitial member comprises a plurality of longitudinal ribs extending beyond the inner surface of the first elongate shaft.

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Hub
8. A catheter, comprising:
a first elongate shaft having an inner surface defining a lumen;
a second elongate shaft slidingly disposed within the lumen of the first elongate shaft;
at least one interstitial member disposed between the inner surface of the first elongate shaft and the outer surface of the second elongate shaft;
a hub disposed about the first elongate shaft proximate the proximal end thereof;
a slider disposed about the second elongate shaft proximate a proximal portion thereof; and
wherein the slider is disposed within a chamber defined by the hub.

9. The catheter of claim 8, wherein the at least one interstitial member comprises a projection extending beyond the outer surface of the second elongate shaft.

10. The catheter of claim 8, wherein the at least one interstitial member comprises a projection extending beyond the inner surface of the first elongate shaft.

11. The catheter of claim 8, wherein the at least one interstitial member comprises a coil.

12. The catheter of claim 8, wherein the at least one interstitial member comprises a coil disposed between the inner surface of the first elongate shaft and the outer surface of the second elongate shaft.

13. The catheter of claim 8, wherein the at least one interstitial member comprises a radial rib extending beyond the inner surface of the first elongate shaft.

14. The catheter of claim 8, wherein the at least one interstitial member comprises a plurality of longitudinal ribs extending beyond the inner surface of the first elongate shaft.

15. A catheter shaft assembly, comprising:
a first elongate shaft having an inner surface defining a lumen;
a second elongate shaft slidably disposed within the lumen of the first elongate shaft;
at least one interstitial member disposed between the inner surface of the first elongate shaft and the outer surface of the second elongate shaft;

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a hub disposed about the first elongate shaft proximate the proximal end thereof;
a slider disposed about the second elongate shaft proximate a proximal portion thereof;
wherein the slider is disposed within a chamber defined by the hub;
a plurality of indicia disposed upon a surface of the hub proximate the slider;
the second elongate shaft forming a point at the distal end thereof;
the second elongate shaft defining an injection port proximate the point thereof;
the second elongate shaft defining an injection lumen in fluid communication with the injection port;
the injection lumen being in fluid communication with a fluid source; and
wherein the fluid source is capable of injecting fluid into the injection lumen of the second elongate shaft.

16. The catheter of claim 15, wherein the at least one interstitial member comprises a projection extending beyond the outer surface of the second elongate shaft.

17. The catheter of claim 15, wherein the at least one interstitial member comprises a projection extending beyond the inner surface of the first elongate shaft.

18. The catheter of claim 15, wherein the at least one interstitial member comprises a coil.

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20. The catheter of claim 15, wherein the at least one interstitial member comprises a radial rib extending beyond the inner surface of the first elongate shaft.